



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS, TX 75202-2733

MAY 11 2010

Mr. James Moore, P.E., Manager  
Water Quality Assessment Section (MC-150)  
Texas Commission on Environmental Quality (TCEQ)  
P.O. Box 13087  
Austin, TX 78711-3087

Dear Mr. Moore:

The Environmental Protection Agency (EPA) has completed its technical review of site-specific marine nickel criteria, which were submitted to EPA for review and approval. The site-specific marine criteria apply to a portion of Phillips Ditch and Santa Anna Bayou. According to §307.4(h)(3) of the 2000 *Texas Surface Water Quality Standards* (TX WQS), Phillips Ditch is an unclassified, tidally-influenced, water body with no significant aquatic life use. Santa Anna Bayou is a tributary to classified segment 1005 - Houston Ship Channel/San Jacinto River Tidal, with a high aquatic life use. EPA guidance allows states to develop site-specific criteria for waters for which default water quality criteria may not be appropriate.

Under Texas Pollutant Discharge Elimination System (TPDES) Permit No. 01539, the OxyVinyls - Battleground facility is authorized to treat and discharge wastewater to Phillips Ditch, thence to Santa Anna Bayou in segment 1005 of the San Jacinto-Brazos Coastal Basin. A water effects ratio (WER) study was performed using laboratory water and simulated downstream water (consisting of 55% effluent from outfall 001 and 45% receiving stream water) to determine if site-specific water quality criteria for nickel would be more appropriate than the statewide nickel criteria.

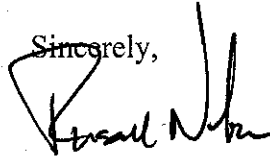
Our review of the final WER study indicates that the statewide water quality criteria for nickel may be adjusted to account for site-specific physical and chemical interactions which mitigate the toxicity of nickel to aquatic organisms. The methodology used to determine the site-specific criteria is consistent with EPA's 1994 WER guidance for metals and with the previously-approved WER provision in §307.6(c)(9) of the TX WQS. From the study, final WERs of 1.13 for dissolved nickel and 1.17 for total nickel were calculated from the geometric mean of three individual WERs derived from toxicity tests conducted on a mysid (*Americamysis bahia*).

Based on our technical review of the final study, the 2000 TX WQS criteria for nickel and the resulting dissolved WER of 1.13, EPA has determined that a site-specific marine acute water quality criterion of 133 µg/L and a chronic water quality criterion of 14.8 µg/L are approvable. However, in order for EPA to take a formal approval action under §303(c) of the Clean Water Act, fulfillment of the public participation requirements found at 40 CFR Part 25 for this site-specific water quality standards revision is necessary. In order to fulfill these

requirements and to complete TCEQ's water quality standards submission, we request that TCEQ submit to EPA a copy of the public notice for this site-specific water quality standards revision, along with any comments received during the public comment period (or documentation that no comments were received). The public participation process may be completed through the permit application process, as noted in §307.6(c)(9) of the TX WQS.

If you should have any questions, please call me at (214) 665-6644 or have your staff contact Diane Evans at (214) 665-6677.

Sincerely,



Philip A. Crocker  
Chief

Watershed Management Section (6WQ-EW)

cc: Michael Pfeil, TCEQ - Water Quality Assessment Section (MC-150)  
Satya Dwivedula, TCEQ - Wastewater Permitting Section (MC-148)  
Debbie Miller, TCEQ - Standards Group (MC-234)